

CLAIMS:

1. A telephone providing automatic tracking of calling plan charges, comprising:
  - at least one time bin; and
  - a call time controller adapted for:
    - (a) receiving a set of calling plan rules defining a billing period and at least one calling period,
    - (b) receiving time information and call occurrence information,
    - (c) identifying at least one calling period associated with each call, and
    - (d) determining the call duration for a call according to said set of calling plan rules,
2. The telephone of claim 1, wherein said telephone is a cellular telephone having a display and a speaker supported by a housing.
3. The telephone of claim 2, wherein the calling plan allows during the billing period a base number of minutes for use during said first calling period, and said call time controller being further adapted to display an unused number of base minutes.

4. The telephone of claim 3, wherein said call time controller is further adapted to sound an alarm when a predetermined number of unused base minutes remain in a billing period.

5. The telephone of claim 3, wherein said call time controller is further adapted to display the number of minutes used in excess of the base minutes allowed in a billing period.

6. The telephone of claim 5, wherein said call time controller is further adapted to calculate accrued cost of calls at any time during a billing period according to the calling plan rules and display said cost.

7. The telephone of claim 2, wherein said call time controller is further adapted to receive a predetermined time corresponding to the time of termination of a billing period, and to reset said at least one time bin according to the calling plan rules.

8. The telephone of claim 7, wherein said call time controller resets said at least one time bin to the number of unused base minutes in a preceding billing period.

9. The telephone of claim 2, wherein said call time controller is further adapted to determine the call duration of each call by subtracting a particular time from the duration according to the calling plan rules.

10. The telephone of claim 2, wherein said call time controller is further adapted to determine the call duration of each call by rounding a particular time up to the whole number of minutes according to the calling plan rules.

11. The telephone of claim 2, wherein the calling plan defines a plurality of calling periods, and wherein the telephone further comprises a plurality of time bins.

12. A telephone providing automatic tracking of calling plan charges, comprising:

a call timer; and

a call time controller, wherein, for a call made or received with the telephone, said call having a duration, said time controller is adapted for:

(a) receiving a set of charge parameters and time information,

(b) identifying a first charge parameter from said set of charge parameters that pertains to a first period of said duration by use of said time information,

(c) causing said call timer to accumulate time over said first period,

(d) receiving a predetermined time corresponding to the time of

termination of a billing period, and

(e) resetting said call timer at said predetermined time according to  
said time information.

13. The telephone of claim 12, wherein said call time controller is further  
adapted for computing an accumulated charge for said call by integrating said first charge  
parameter over said first period.

14. The telephone of claim 13, further comprising a display supported by a  
housing for the telephone, for displaying the computed accumulated charge.

15. The telephone of claim 12, wherein said call time controller is further  
adapted for identifying a second charge parameter from said set that pertains to a second  
period of said duration by use of said time information, and causing said call timer to  
accumulate time over said second period.

16. The telephone of claim 15, wherein said call time controller is further  
adapted for computing an accumulated charge for said call by integrating said first charge  
parameter over said first period, integrating said second charge parameter over said  
second period, and adding the result.

17. The telephone of claim 16, further comprising a display supported by a

housing for the telephone, for displaying the computed accumulated charge.

18. The telephone of claim 15, wherein said call timer is apportioned into first and second call time bins, wherein said call time controller causes said first call timer bin to accumulate time over said first period and not said second period, and wherein said call timer controller causes said second call timer bin to accumulate time over said second period and not said first period.

19. The telephone of claim 12, wherein said call time controller is further adapted to reset said call timer to zero at said predetermined time.

20. The telephone of claim 12, wherein said call time controller is further adapted to reset said call timer to the number of base minutes at said predetermined time.

21. The telephone of claim 12, wherein said call time controller is further adapted to reset said call timer to the number of carryover minutes at said predetermined time.

22. The telephone of claim 12, further comprising a speaker supported by a housing for the telephone, for sounding an alarm on the occurrence of a predetermined condition.

23. The telephone of claim 22, wherein said predetermined condition is the

end of the billing period.

24. The telephone of claim 22, wherein said predetermined condition is that a predetermined number of base minutes remain.

25. The telephone of claim 22, wherein said predetermined condition is that said first charge parameter is no longer applicable.

26. The telephone of claim 12, wherein said telephone is a cellular telephone.

27. A method for automatically tracking charges according to calling plan rules for calls made or received with at least one telephone comprising the steps of providing:

a call timer; and

a call time controller, wherein, said call time controller is adapted for a call made or received with the telephone, said call having a duration, said time controller is adapted for:

(a) receiving a set of charge parameters and time information,

(b) identifying a first charge parameter from said set of charge parameters that pertains to a first period of said duration by use of said time information,

(c) causing said call timer to accumulate time over said first period,

(d) receiving a predetermined time corresponding to the time of  
termination of a billing period, and

(e) resetting said call timer at said predetermined time according to  
said time information.

28. The method of claim 27, wherein said call time controller is further  
adapted for computing an accumulated charge for said call by integrating said first charge  
parameter over said first period.

29. The method of claim 28, further comprising providing a display supported  
by a housing for the telephone, for displaying the computed accumulated charge.

30. The method of claim 27, wherein said call time controller is further  
adapted for identifying a second charge parameter from said set that pertains to a second  
period of said duration by use of said time information, and causing said call timer to  
accumulate time over said second period.

31. The method of claim 30, wherein said call time controller is further  
adapted for computing an accumulated charge for said call by integrating said first charge

parameter over said first period, integrating said second charge parameter over said second period, and adding the result.

32. The method of claim 31, further comprising providing a display supported by a housing for the telephone, for displaying the computed accumulated charge.

33. The method of claim 32, wherein said call timer is apportioned into first and second call time bins, wherein said call time controller causes said first call timer bin to accumulate time over said first period and not said second period, and wherein said call timer controller causes said second call timer bin to accumulate time over said second period and not said first period.

34. A machine readable medium embodying a program of instructions for to be performed by a machine for automatically tracking charges according to calling plan rules for calls made or received with at least one telephone, said instructions comprising the steps of providing:

a call timer; and

a call time controller, wherein, said call time controller is adapted for a call made or received with the telephone, said call having a duration, said time controller is adapted for:

(a) receiving a set of charge parameters and time information,

(b) identifying a first charge parameter from said set of charge parameters that pertains to a first period of said duration by use of said time information,

(c) causing said call timer to accumulate time over said first period,

(d) receiving a predetermined time corresponding to the time of termination of a billing period, and

(e) resetting said call timer at said predetermined time according to said time information.

35. The machine readable medium of claim 34, wherein said call time controller is further adapted for computing an accumulated charge for said call by integrating said first charge parameter over said first period.

36. The machine readable medium of claim 35, further comprising providing a display supported by a housing for the telephone, for displaying the computed accumulated charge.

37. The machine readable medium of claim 34, wherein said call time controller is further adapted for identifying a second charge parameter from said set that pertains to a second period of said duration by use of said time information, and causing

said call timer to accumulate time over said second period.

38. The machine readable medium of claim 37, wherein said call time controller is further adapted for computing an accumulated charge for said call by integrating said first charge parameter over said first period, integrating said second charge parameter over said second period, and adding the result.

39. The machine readable medium of claim 38, further comprising providing a display supported by a housing for the telephone, for displaying the computed accumulated charge.

40. The machine readable medium of claim 39, wherein said call timer is apportioned into first and second call time bins, wherein said call time controller causes said first call timer bin to accumulate time over said first period and not said second period, and wherein said call timer controller causes said second call timer bin to accumulate time over said second period and not said first period.

41. A telephone providing automatic tracking of calling plan charges, comprising a call time controller adapted for receiving and storing a set of calling plan rules and configuration data.

42. The telephone of claim 41, wherein said calling plan rules are transferred to the call time controller using a telephone communication method.

43. The telephone of claim 42, wherein said telephone communication method is a short message service protocol.

44. The telephone of claim 42, wherein said telephone communication method comprises retrieving data from a web server.

45. The telephone of claim 41, further comprising a data port, wherein said calling plan rules are transferred to the call time controller using said data port.

46. The telephone of claim 41, further comprising a key pad, wherein said configuration data is entered using said keypad.

47. The telephone of claim 41, wherein said calling plan rules are applied with respect the telephone usage of a second telephone, and wherein said second telephone usage data is transferred from said second telephone to the telephone.

48. The telephone of claim 47, said second telephone usage data is transferred from said second telephone to the telephone through an intermediary, wherein said intermediary is a web server.